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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,401	07/28/2003	Herman Spencer JR.	TRIRG-01004US0	7215

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EXAMINER
JONES, HUGH M

ART UNIT	PAPER NUMBER
2128	

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/629,401	SPENCER ET AL.
	Examiner	Art Unit	
	Hugh Jones	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 November 2005</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-41</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-12, 14-22, 26-41</u> is/are rejected.

7)☒ Claim(s) <u>13 and 23-25</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 July 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-41 of U. S. Application 10/629,401, filed 7/28/2003, are pending.

Priority

2.   The later-filed application must be an application for a patent for an invention
which is also disclosed in the prior application (the parent or original nonprovisional
application or provisional application). The disclosure of the invention in the parent
application and in the later-filed application must be sufficient to comply with the
requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v.
Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

3.   The disclosure of the prior-filed application, Application No. 60/398,924, fails to
provide adequate support or enablement in the manner provided by the first paragraph
of 35 U.S.C. 112 for one or more claims of this application. It is noted that there are at
least six more pages in the non-provisional application than in the provisional
application. A specific showing of support for the claimed invention in the provisional
application is required in order to traverse this finding.

Drawings

4.   Figure 1 should be designated by a legend such as --Prior Art-- because only
that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in
compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid
abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine,
> manufacture, or composition of matter, or any new and useful improvement
> thereof, may obtain a patent therefor, subject to the conditions and requirements
> of this title.

6.   **Claims 32, 41 are rejected under 35 U.S.C. 101 because the claimed**

invention is drawn to non-statutory subject matter since the claims are drawn to

an abstract mathematical algorithm or disembodied program steps and are not

tangible.

- Claim 32: the claim recites disembodied computer code (non-functional

  descriptive material). The code requires a computer, which has not been

  claimed in order for the code to be operable. Thus, the steps appear to be

  disembodied program steps and are not statutory. The claims are not

  concrete and tangible.

- It is impossible to determine the statutory class of claim 41 and whether it is in

  fact statutory or not. It is unclear whether Applicants are attempting to claim a

  software program or a method. A disembodied software program is not

  statutory. Furthermore, software cannot comprise steps (process). Software,

when acted upon by the computer may cause a computer to execute steps.

The Examiner submits that the claims as written, are merely drawn to

nonstatutory descriptive material since the claimed mathematical algorithm or

disembodied program steps do not impart any functionality (let alone be stored on a

tangible medium)). (i.e. not a computer program product or executable instructions

embodied on a computer-readable medium). Analysis of the claim indicates that the

claims are drawn to an abstract algorithm or disembodied computer program steps and

are not tangible.

7.   The claims merely recite an abstract mathematical algorithm or disembodied

program steps. The claims are not concrete, useful and tangible.

8.   Claims 1-21 are statutory because the claimed method is carried out with a

tangible processing device (as per par. 20 of the specification).

9.   Claims 22-31 are statutory because a tangible storage device is claimed. Note

that claims 22-31 refer to storage devices with embodied code. However, the code is

not being executed by a computer. Therefore, with respect to prior art, the claims

merely recite *one or more processor readable storage devices.*

10.   Claim 33 is statutory because a tangible processing device is claimed.

11.   Claims 34-40 are statutory because the marking is carried out with a tangible

processing device.

Claim Objections

12.   Claim 1 should be terminated with a period.

13.   Claims 23-31 are objected to under 37 CFR 1.75(c), as being of improper

dependent form for failing to further limit the subject matter of a previous claim. Claims

22 refers to embodied code. However, it is noted that the code is not being executed by

a computer. Therefore, with respect to prior art, the claims merely recite *one or more*

processor readable storage devices. Dependent claims directed at *steps* or *code* do not

further limit the independent claim.

14.   Claim 32 is objected because there are two transitional phrases, namely

"including, comprising".

15.   Applicant is required to cancel the claim(s), or amend the claim(s) to place the

claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

16.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

17.   Claims 5-6, 8, 16-18, 20, 31-32, 38-39 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

18.   Claims 5, 8, 20, 32, 38-39 are ambiguous. The meaning of "...generating a

temporary memory structure..." is ambiguous. It appears that it should be replaced with

"stored in memory"? Similar reasoning applies to claims 20, 32, 38, 39.

19.   Claim 6 is ambiguous. The meaning of "...the memory structure is destroyed..."

is ambiguous. It appears that it should be replaced with "deleted from memory"?

20.   Claims 16-18 are ambiguous because while the independent claim preamble

recites "marking" the drawing, such a feature has not been claimed.

21.   Claim 31 is ambiguous. The meaning is impossible to determine. The claim

therefore has not been examined with respect to prior art.

22.   Claim 32 is ambiguous because there are two transitional phrases, namely

"including, comprising".

23.   Claim 41 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

in that it fails to point out what is included or excluded by the claim language. This claim

is an omnibus type claim. It is impossible to determine the statutory class and the metes

and bounds of the claim. Claim 41 is therefore not examined with respect to prior art.

Claim Interpretation

24.   The following is noted.

-     Recitations following phrases such as "operable" and "for" (as in claim 22, for

       example) are provided no patentable weight.

-     Claims 22-31 refer to storage devices with embodied code. However, it is

       noted that the code is not being executed by a computer. Therefore, with

       respect to prior art, the claims merely recite *one or more processor readable*

       storage devices.

-     Claims 31, 41 have not been examined with respect to art in view of the 112

       issues.

-     It appears that the claims are directed to takeoffs for blueprints.

Claim Rejections - 35 USC § 102

25.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

26.   Claims 1-12, 14-22, 26-30, 32-40 are rejected under 35 U.S.C. 102(e) as being

clearly anticipated by Jung (6,996,503).

27.   Jung discloses

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1.  A method for marking a computer aided design drawing using a
processing device, comprising;
        finding a door gap in the drawing;
        determining a room relative to said door gap; and
        marking said drawing to indicate a room definition.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line
56 (marking the room with polylines))
2.  The method of claim 1 wherein the step of finding a door gap
comprises determining a set of gap points separated by a threshold wall
thickness. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to
col. 10, line 56 (marking the room with polylines))
3.  The method of claim 1 wherein the door is defined by at Least three
points, and the step of finding the door gap includes determining a gap
Line having a direction between at Least two of the three points. (fig.
6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56
(marking the room with polylines))
4.  The method of claim 1 wherein the method further includes the step
of retrieving wall Lines in the drawing. (fig. 6a; col. 2, lines 60-67,
18-37; col. 9, line 50 to col. 10, line 56 (marking the room with
polylines))
5.  The method of claim 4 wherein the step of retrieving all wall Lines
in the drawing includes generating a temporary memory structure
representing the wall Lines comprising a collection of points and
Lines. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col.
10, line 56 (marking the room with polylines))
6.  The method of claim 5 wherein the memory structure is destroyed
following the marking step. (fig. 6a; col. 2, lines 60-67, 18-37; col.
9, line 50 to col. 10, line 56 (marking the room with polylines))
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7. The method of claim 1 wherein the method further includes the step of retrieving all door Lines in the drawing. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

8. The method of claim 7 wherein the step of retrieving all door Lines in the drawing includes generating a temporary memory structure representing the door lines comprising a collection of points and Lines. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

9. The method of claim 1 wherein the method further includes the step of finding at Least one gap line. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

10. The method of claim 9 wherein the step of determining a room comprises selecting wall Lines beginning at a point in the gap Line and following the direction of the gap Line. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

11. The method of claim 10 wherein the step of determining a room further comprises selecting the left-most Line for a next segment until the gap Line is reached. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

12. The method of claim 9 wherein the step of finding at least one gap Line includes the steps of:
    selecting a first and a second group of contact points for a door gap;
    determining edge points in each selected group; and
    marking a point at an edge of the first group and an edge point in the second group.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

14. The method of claim 1 wherein the step of marking comprises:
    creating CAD polyline entities in the drawing. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

15. The method of claim 1 wherein the step of marking includes the further step of removing door recesses. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

16. A method for automatically marking a computer aided design drawing using a processing device, comprising:
    retrieving at least a set of door lines and a set of wall lines from the drawing;
    creating a set of gap Lines defining at least one door gap; and
    determining a room area relative to each gap Line.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

17. The method of claim 16 wherein the process includes the further step of repairing gap lines having a tolerance less than a wall thickness tolerance specified by a user. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

18. The method of claim 16 wherein the method further includes the step of determining a room area includes the step of removing collinear

points. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

19. The method of claim 16 further including the step of marking the drawing by creating CAD polyline entities. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

20. The method of claim 16 wherein the method further includes the step of simplifying the set of wall Lines and door Lines into respective temporary data structures, each data structure comprising a collection of points an Lines representing the door Lines and wall Lines, respectively. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

21. The method of claim 16 further including the step, prior to the step of retrieving, of receiving user input on the location of wall Lines in the drawing. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

22. One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code for programming one or more processors to perform a method comprising the steps of:

> finding a door gap in the drawing;
> determining a room relative to said door; and
> marking said drawing to indicate a room definition.

(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

26. One or more processor readable storage devices according to claim 22 wherein the step of marking includes the step of removing door recesses. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

27. One or more processor readable storage devices according to claim 22 wherein the step of marking further includes the step of removing collinear points. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

28. One or more processor readable storage devices according to claim 22 further including the step of reforming arc segments. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

29. One or more processor readable storage devices according to claim 22 further including the step of creating CAD polyline entities for each of said room definitions. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

30. One or more processor readable storage devices according to claim 22 further including the step of assigning a parent child hierarchy to each of said room definitions. (fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

32. A drawing analysis application operable on a processing device including, comprising code for

> instructing a processor to perform the steps of:
> creating at least one temporary data structure storing drawing information;
> determining from the temporary data structure door gaps in the drawing;
> successively determining walls of a room relative to the door gap; and

creating a room definition based on said step of successively determining.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))
33. A system for marking a drawing, comprising:
        a processing device;
        non-volatile memory coupled to the processing device instructing the processing device to perform the steps of:
        finding at least one reference vector in the drawing;
        determining an area definition based on drawing data relative to said reference; and
        marking said drawing to indicate a area definition.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

34. A method for marking a computer aided design drawing using a processing device, comprising:
        finding at least one reference vector in the drawing;
        determining an area definition based on drawing data relative to said reference vector; and
        marking said drawing to indicate a area definition.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))
35. The method of claim 34 wherein the step of finding a reference vector comprises defining a door gap.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))
36. The method of claim 34 wherein the step of determining an area definition comprises defining a virtual area definition.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))
37. The method of claim 34 wherein the drawing data relative to the reference is a wall line.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))
38. The method of claim 34 wherein the step of finding includes the step of creating at least one temporary memory structure representing the drawing data.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))
39. The method of claim 38 wherein the temporary memory structure includes a representation of the door or wall Lines comprising a collection of points and Lines.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))
40. The method of claim 34 wherein the step of marking comprises:
creating CAD polyline entities in said drawing data.
(fig. 6a; col. 2, lines 60-67, 18-37; col. 9, line 50 to col. 10, line 56 (marking the room with polylines))

Allowable Subject Matter

28.   Claims 13, 23-25 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims. The highlighted portions are

considered novel and nonobvious over the prior art of record:

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13. The method of claim 12 wherein the steps of selecting, determining
and marking are repeated by reversing the first and second group of
points.

23. One or more processor readable storage devices according to claim
22 wherein the step of finding a door gap comprises code for performing
the sub-steps of:
        selecting a first group of contact points and a second group of
contact points;
        following an outside edge of a first group of contact points
until it reaches an edge that crosses between the groups;
        following the outside edge of the second group of contact pointes
until it reaches a second edge that crosses between the groups;
        comparing the first and second crossings.
24. One or more processor readable storage devices according to claim
23 wherein the gap line is defined as the last point from the second
group and an edge point in the first group.
25. One or more processor readable storage devices according to claim
23 wherein the step of selecting comprises selecting based on a wall
thickness variable set by a user.
```

29.   **Any inquiry concerning this communication or earlier communications**

from the examiner should be:

        directed to: Dr. Hugh Jones telephone number (571) 272-3781,

        Monday-Thursday 0830 to 0700 ET,

or

        the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279.

        Any inquiry of a general nature or relating to the status of this application should

        be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to:

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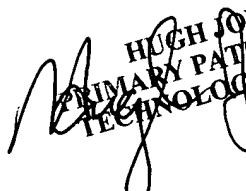
Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or (703) 308-1396 (for informal or draft communications, please label *PROPOSED* or *DRAFT*).

Dr. Hugh Jones

Primary Patent Examiner

July 8, 2006